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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/619,276 | 07/14/2003 | Klaus Topp | 90221 | 6324 |

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EXAMINER

AURORA, REENA

ART UNIT PAPER NUMBER

2862

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,276

Applicant(s) ~~AK~~

TOPP ET AL.

Examiner

Reena Aurora

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 - 7 and 9 - 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 - 7 and 9 - 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This communication is in response to amendment received on 12/13/04.

Claims 2 and 8 have been canceled by the applicant.

Claim Objections

1. Claim 1 is objected to because of the following informalities: the phrase "the position of the sample" lacks antecedent".
2. Claim 10 is objected to because of the following informalities: it is not clearly defined how the device is being set-up.
3. Claim 12 is objected to because of the following informalities: the phrase "said first and second surfaces" lacks antecedent".
4. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 5 – 7 and 11 - 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (3,890,564) in view of Le (6,762,604).
7. As to claims 1 and 7, Watanabe et al. (hereinafter referred to as Watanabe) discloses an apparatus for measuring conductivity or resistivity of a semiconductor

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wafer having first and second surfaces including a means for measuring the conductivity (Abstract, lines 1 - 9) of a sample (s, fig. 3) according to the eddy current technique (col. 1, lines 43 - 54), wherein the sample (s) is introducible into a gap between magnetic cores (41, 42) for measurement and distance-measuring means for measuring the position of the sample in the gap for measurement (col. 8, lines 3 - 8), and computing means for determining the sheet resistance (Abstract, lines 21 - 28) on the basis of the measured conductivity and of the position of the sample in the gap for measurement. Watanabe fails to show that the distance-measuring means operate in a contactless manner by means of ultrasound, capacitive or optical techniques. Le discloses an eddy current monitoring system providing a thickness profile of a substrate sample by obtaining initial and terminating resistance from the sample. Le further discloses optical sensors or ultrasound or capacitance sensor may be implemented as long the distance between the sense coil and the substrate surface can be maintained. Therefore, it would have been obvious for one skilled in the art, at the time of invention to modify the device of Watanabe in view of Le such that the distance measuring means may be ultrasound, capacitive or optical or any conventional proximity sensor based on the environment where the sensor is being used to determine the resistivity of the substrate (col. 4, lines 26 - 40).

8. As to claim 7, the method steps of claim 7 can obviously be carried out by the structure of the device stated above. Therefore, the method of claim 7 is rejected on the same grounds as of claim 1.

9. As to claims 5 and 11, Watanabe discloses a means for measuring the position of the sample (fig. 2 and 3) acquiring the position of the sample at least at two locations, preferably adjacent to and in particular at both sides of the location of the measurement of the conductivity, wherein preferably a pair of sensors (41, 42) are arranged at each location.

10. As to claims 6 and 12, Watanabe discloses a means for determining the position of at least one of the two surfaces of the first and second surfaces of a sample (fig. 2 and 3).

11. Claims 3 – 4 and 9 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danielson (5,541,510) in view of Lehman et al. (6,433,541) as applied to claims 1 and 7 and further in view of Slates (6,346,807).

12. As to claims 3 - 4 and 9 – 10, Watanabe and Le fail to disclose a memory in which a mathematical function and coefficient of the function are being stored and used in calculation of the sheet resistance relative to the position of the sample in the gap for measurement. Slates discloses an apparatus for determining a gap between a proximity probe and a conductive target material wherein coefficients of function are measured and stored in the memory and then later recalled for use in gap measurement (fig. 10, col. 23, lines 43 – 50 and 22 - 27). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Watanabe in view of Le with the teachings of Slates such that storing a function in the memory for calculation of the sheet resistance would result in accurate and faster processing.

Response to Arguments

13. Applicant's arguments with respect to claims 1, 3 – 7 and 9 - 12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, E. Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Reena Aurora



JAY PATIDAR
PRIMARY EXAMINER